service disabled veteran owned small business

November 08, 2007

Mr. Fred Micke
On-Scene Coordinator
Emergency Response Branch
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, IL 60604

Subject: **Draft Site Assessment Letter Report**
USS Lead Site
East Chicago/Hammond, Lake County, Indiana
Technical Direction Document No. S05-0708-002
Contract No. EP-S5-06-03

Dear Mr. Micke:

STN Environmental JV (STN), as the Superfund Technical Assessment and Response Team (START) Contractor, has prepared this Site Assessment Letter Report in accordance with the requirements of the U.S. Environmental Protection Agency (U.S. EPA) Technical Direction Document (TDD) No. S05-0708-002. The scope for this TDD was to conduct soil samples of specific properties which were located the former USS Lead Site in East Chicago, Lake County, Indiana. Specifically, START was tasked to prepare a health and safety plan; collect soil sampling from nearby public properties, document on-site conditions with written logbook notes and a still camera; evaluate analytical data; and prepare a site assessment report.

This report discusses the site background, site assessment activities, sample analytical results, and potential site-related threats and includes a summary of the site assessment. Enclosure 1 contains a photographic log of site activities. Enclosure 2 contains the validated analytical data package for samples collected by START. Enclosure 3 contains the comparison results of the analytical data from the laboratory and the XRF results.

Site Background

U.S. Smelter and Lead Refinery Inc., commonly known as USS Lead, or other industries that have operated in the area. The company operated on a 79-acre site at 5300 Kennedy Ave. from 1906 until December 1985. They recovered lead from scrap metal and automobile batteries. USS Lead produced lead waste as part of their smelting process. Some of this waste was emitted into the air, while some built up in large piles on the ground of the facility. The former plant area has already had a removal action. Further investigations were based on potential releases onto properties surrounding the facility based on air emissions from the site.

U.S. EPA conducted site assessments in 2003, and 2006. This area surrounding the site is in a heavily industrialized area of East Chicago and Hammond, Indiana. Lead is being sampled due to a smelter process operating in the vicinity. After review for the data from the 2006 sampling event, recommendations were made to collect samples in areas which should not have been impacted by the smelting operation (i.e. background samples).

Site Assessment Activities

The background investigation activities was designated to collect soil samples at the surface and at a depth of at a maximum of 18 inches of areas that are considered background locations which have not been altered since the closure of the USS Lead Site. The activities planned for the background investigation was to collect XRF readings of each surface sample collected along with collecting the GPS readings. US EPA Fields Group was scheduled to collect the GPS and XRF readings for each sampling grid location. START was to assist with the sample collection and arranged for a laboratory to conduct the analysis through the Contract Laboratory Program (CLP). Along with collecting composite samples, photographs were taken during these activities are provided in Enclosure.

Designated Sample Locations

Prior to conducting the background investigation, US EPA identified approximately seven locations that were public and private properties that may have not been disturbed prior to USS Lead seized operations. Initially there were seven locations that were recommended for background investigation. US EPA began acquiring consents through access agreement to properties from local authorities and private owners. Several of the locations were eliminated due to high traffic areas; locations that may have been updated due to possible reconstruction; and properties where the consent for the access agreement was denied.

Three areas were predetermined as areas of concern for the background investigation the first location was Pulaski Park, SL-16, located in Hammond, Indiana and is approximately two miles west by northwest of the USS Lead Site. The park is several acres in size and is south of 137th Street, north of 139th Street and west of Sheffield Avenue near the Indiana and Illinois border. The surround properties are both commercial and residential (Figure 1).

The second property, SL-17, was Saint Joseph/Saint John Cemetery which is located at 1547 167th Street in Hammond, Indiana. The site is directly west of Calumet Avenue and east of Columbia Boulevard. The area of concern was directly north of 1679th Street. Area is approximately one-mile southwest of the USS Lead Site (Figure 2).

A third area was located on a parkway in a residential subdivision in East Chicago, Indiana. On the day of the investigation it was eliminated due to the areas close proximately to street traffic, and to private properties which access agreement was not collected.

Sampling Procedure

Each designated location had several composite sampling areas. At each specific composite sampling area, START collected a five point composite sample of both the surface and subsurface samples. The subsurface sample was approximately 18 inches in depth. The US EPA Fields Group was collecting GPS information along with XRF readings from each of the

surface samples collected for the five points composite. The US EPA Fields Group also surveyed the subsurface composite subsurface composite sample. All the composite samples were homogenized and placed into a laboratory approved sampling jars. All sampling procedures follow the site specific sampling plan.

.Background Investigation

On September 5, 2007, The US EPA Fields Group along with US EPA On-Scene Coordinator (OSC), Fredrick Micke, and US EPA Response Project Manager (RPM), Michael Berkoff, and START met at Pulaski Park in Hammond, Indiana. The sampling group consisted of the US EPA Field Group and START, US EPA Fields Group collected the GPS location readings and XRF total lead survey reading of the sample areas while START assisted in collecting soil samples.

After completing the safety meeting for the morning, US EPA Fields Group began calibration procedures for the XRF and tested the GPS unit. START prepared the CLP laboratory paperwork and the equipment required to collect composite samples at the surface and subsurface.

The first composite sample was collected west of the storage and restroom building located in the central area of the park. The first composite samples were designated as SL-16-1-S and D. The nomenclature for the sample identification was as follow:

SL = Sample Location
16 = the background investigation sample location identification number
1 = the five-point composite number
S/D = Surface sample or Depth sample (subsurface sample)

The second composite samples, SL-16-2-S and D, were collected approximately 300 yards southwest of the initial sample area in Pulaski Park. US EPA Fields Group collected the GPS location readings and the XRF readings for lead. The third set of samples, SL-16-3-S and D, was

collected southwest of SL-16-2. The area was near a low lying area where potential runoff may have accumulated over the years.

At 1300 hours, the sampling group continued to next location at Saint Joseph Cemetery, Sample Location 17 (SL-17). The care taker of the facility assisted the sampling group by providing locations where the area had not been disturbed for several decades. The composite samples SL-17-1-S and D were collected near the southeast corner of the property north of 169th Street. The five-point samples were surveyed with the XRF and the area identified by the GPS unit. Samples SL-17-2-S and D were collected approximately 100 yard northeast of SL-17-1. The five-point samples were collected. The GPS information and XRF reading for lead. The next sample location, SL-17-3, was approximately 500 yards north of SL-17-2 and SL-17-4 samples were collected near the southeast corner along the fence line near the St Michaels Cemetery to the east of St Joseph Cemetery.

The composite samples SL-16-1-S and D through SL 16-3-S and D (6 total composite samples from Pulaski Park) along with, SL-17-1_s and D through SL-17-4-S and D (8 total composite samples from Saint Joseph Cemetery) and along with two duplicate samples and the rinsate samples were requested for total lead analysis. START followed Forms II Lite Chain of Custody procedures for shipping the samples to the CLP laboratory. The laboratory conducting the analysis was Bonner Analytical Testing Company, in Hattiesburg, MS and was given the Case No. 36791.

The samples were placed inside a cooler, placed on ice, and shipped overnight to Bonner Analytical Testing

Sample Analytical Results

START reviewed the sample analytical data and supporting quality assurance/quality control (QA/QC) data provided by the US EPA Central Regional Laboratory. The validated analytical data package is included in Enclosure 2. Based on the data validation from the US EPA Central Regional Laboratory, the data are acceptable for use as qualified. Table 1 lists detected physical parameters in these samples. Each surface soil sample collected was screened with the XRF prior to generating the composite sample. Each of the subsurface sample composite samples was screened with the XRF.

TABLE 1 SAMPLE ANALYTICAL RESULTS USS Lead Site East Chicago/Hammond, Lake County, Indiana			
Sample ID	**Parameter Comparison (mg/kg)**		
	Date Collected	**Lab Results***	**IDEM Standard Resid/Com****
SL16-1-S (surface)	9/05/07	60.2	81/250
SL16-1-D (subsurface)	9/05/07	28.4	81/250
SL16-2-S (surface)	9/05/07	82.8	81/250
SL16-2-D	9/05/07	52.6	81/250
SL16-3-S (surface)	9/05/07	76.4	81/250
SL16-3-D	9/05/07	21.7	81/250
SL17-1-S (surface)	9/05/07	67.2	81/250
SL17-1-S-X (surface) Dup	9/05/07	70.4	81/250
SL17-1-D	9/05/07	30	81/250
SL17-2-S (surface)	9/05/07	80.2	81/250
SL17-2-D	9/05/07	79.1	81/250
SL17-3-S (surface)	9/05/07	91.2	81/250
SL17-3-D	9/05/07	53.3	81/250
SL17-3-S-X (surface) Dup	9/05/07	98.6	81/250
SL17-4-S (surface)	9/05/07	57	81/250
SL17-4-D	9/05/07	30.7	81/250
SL17-2-S (surface)	9/05/07	83.5	81/250

Notes:

*All analyses were conducted by Bonner Analytical Testing Company, Hattiesburg, MS.

** Based on Indiana Department of Environmental Management standard for lead in soil for residential and commercial properties.

Potential -Related Threats

The threats posed by the lead detected during the site investigation were below the industrial state commercial standard of 250 ppm set by the Indiana Department of Environment (IDEM). The results from the XRF samples collected during the investigation were all less than 100 ppm. The results were evaluated in accordance with Title 40 of the *Code of Federal Regulations* (CFR), Section 300.415(b) (2) and IDEM and determined that there is no pose no threats to human health and the environment based on levels detected which were evaluated based on the criteria listed in 40 CFR, Sections 261.20 through 261.24 and IDEM standards for lead. .

Summary

On September 4, 2007, U.S. EPA OSC Fred Micke and RPM Michael Berkoff, along with US EPA Field Group and START conducted site assessment activities at two locations in Hammond, Indiana. Site assessment activities included collection of 14 composite samples at seven locations, three locations at Pulaski Park and four locations at St John/St Joseph Cemetery both located in Hammond, Indiana. The composite samples were also surveyed with a XRF unit and the coordinates for each location of the five point composites were download from the GPS unit along with each result of the XRF unit. Based on the CLP laboratory results and the XRF readings for lead, this evaluation of the total lead on the surface and approximately one to two feet below the surface do not pose a threat of exposure to human health and the environment, to. Thus, a removal action is not warranted at these locations

Sincerely,

Ronald Bugg
Project Manager, STN Environmental JV

Enclosure 1: Photographic Log and Figures
Enclosure 2: Validated Analytical Package
Enclosure 3: Table 2 Laboratory and XRF results

cc: Michael Berkoff, RPM US EPA
Raghu Nagam, STN JV START Program Manager

ENCLOSURE 1

PHOTOGRAPHIC LOG AND FIGURES

(4 Pages)

ENCLOSURE 2

VALIDATED LABORATORY ANALYTICAL RESULTS

(60 Pages)

ENCLOSURE 3

TABLE 2 LABORATORY ANAYSIS AND XRF RESULTS

(1 Page)

November 08, 2007

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This report discusses the site background, site assessment activities, sample analytical results, and potential site-related threats and includes a summary of the site assessment. Enclosure 1 contains a photographic log of site activities. Enclosure 2 contains the validated analytical data package for samples collected by START.

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1906 until December 1985. They recovered lead from scrap metal and automobile batteries. USS Lead produced lead waste as part of their smelting process. Some of this waste was emitted into the air, while some built up in large piles on the ground of the facility. The former plant area has already had a removal action. Further investigations were based on potential releases onto properties surrounding the facility based on air emissions from the site.

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Site Assessment Activities

The background investigation activities was designated to collect soil samples at the surface and at a depth of at a maximum of 18 inches of areas that are considered background locations which have not been altered since the closure of the USS Lead Site. The activities planned for the background investigation was to collect XRF readings of each surface sample collected along with collecting the GPS readings. US EPA Fields Group was scheduled to collect the GPS and XRF readings for each sampling grid location. START was to assist with the sample collection and too arranged for a laboratory to conduct the analysis through the Contract Laboratory Program (CLP). Along with collecting composite samples, photographs were taken during these activities are provided in Enclosure.

Designated Sample Locations

Prior to conducting the background investigation, US EPA identified approximately seven locations that were public and private properties that may have not been disturbed prior to USS Lead terminating their operations. Initially there were seven locations that were recommended for background investigation. US EPA began acquiring consents through access agreement to properties from local authorities and private owners. Several of the locations were eliminated

due to high traffic areas; locations that may have been updated due to possible reconstruction; and properties where the consent for the access agreement was denied.

The initial plan was to collect three to four composite samples from three predetermined areas. The first area was inside Pulaski Park, which is a public park located in Hammond, Indiana. The park is approximately two miles west by northwest of the USS Lead Site. The park is several acres in size and is south of 137th Street, north of 139th Street and west of Sheffield Avenue near the Indiana and Illinois border. The surround properties are both commercial and residential (Figure 1).

The second area was Saint Joseph/Saint John Cemetery which is located at 1547 167th Street in Hammond, Indiana. The site is directly west of Calumet Avenue and east of Columbia Boulevard. The area of concern was directly north of 1679th Street. Area is approximately one-mile southwest of the USS Lead Site (Figure 2).

A third area was located on a parkway in a residential subdivision in East Chicago, Indiana. On the day of the investigation it was eliminated due to the areas close proximately to street traffic, and to private properties which access agreement was not collected.

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SL17-4-D	9/05/07	30.7	81/250
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Sincerely,

Ronald Bugg

Project Manager, STN Environmental JV

Enclosure 1: Photographic Log

Enclosure 2: Validated Analytical Package

Enclosure 3: Laboratory Results vs. XRF Results (Fields Group)

cc: Michael Berkoff, US, EPA Region 5 RPM

Raghu Nagam, STN JV START Program Manager

ENCLOSURE 1

PHOTOGRAPHIC LOG

(5 Pages)

ENCLOSURE 2

VALIDATED LABORATORY ANALYTICAL RESULTS

(28 Pages)